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Feed Stuff Analyses

THE NEW FEED INSPECTION LAW, Pages 19-20
DEFINITIONS OF FEEDING STUFFS, Pages 15-18

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MARYLAND STATE COLLEGE OF AGRICULTURE
COLLEGE PARK, MD.

ANALYSES OF

Feeds Sold in Maryland

BY THE

The Maryland State College of Agriculture

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This bulletin contains the results of analysis of samples feeding stuffs obtained from June, 1919, to May, 1920, inclusive. The work has been mostly limited to "concentrated feeding stuffs," as defined in the feed law. The examination of wheat bran, middlings, corn meal and similar feeds has been limited, as a rule, to a microscopic examination for adulterants and have been found practically free from adulteration and are not listed herein.

The feeds herein are, as a rule, by-products from some industry, as the manufacture of oils, alcohol, yeast, breakfast foods, etc., or mixtures of several of them with some refuse molasses. The latter has feeding value, is liked by the animal and prevents the separation of fine and heavy ingredients from the lighter, bulky material of the mixture.

FEED ANALYSIS.

A complete analysis of a feed separates it into its constitutional parts, or groups of constituents having similar properties. The usual constituents are water, ash, protein, fat, fiber and nitrogen-free extract.

WATER is present in all feeds and is an important article of commerce in this way. Old grain, called "dry," will contain about 10 percent, while new grain will contain more. If the amount is over 14 or 15 percent the grain or feed is very liable to mold and ferment. Fresh fruits and vegetables, as cabbage, turnips, etc., frequently contain over 90 percent of water. The water content of feed will change on storage, the amount of change depending on the condition at the start, method of storing, temperature and humidity of the air, etc. If the feed has been kiln-

dried, as with dried brewer's or distiller's grains, molasses feed, etc., gain in weight is common. This would be indicated if the packages weigh more than the guaranteed weight and, in that case, a corresponding decrease in the percent of the other constituents should be expected. On the other hand, should the material lose moisture, a corresponding increase in the percent of the other constituents (but not in the actual amount) occurs.

The changes in moisture content are very important in connection with sampling and analysis and the proper care of samples for analysis—points which are liable to be entirely overlooked by those who have not been instructed in such matters.

ASH, as its name indicates, is the part of the feed which remains after burning. It is the mineral part, which has its origin in the minerals of the earth (soil). All other parts of the feed have their origin, either directly or indirectly, from the air.

PROTEIN, or crude protein, is the nitrogenous part, calculated from the nitrogen by multiplying it by 6.25. It includes albumens and other nitrogenous bodies not so valuable as food. Protein is essential for the formation of flesh, nerves, hair, feathers, etc., in fact nearly all tissues of the animal body, except fat, and it may serve to form fat.

FAT, or "crude fat," is the ether extract obtained by treating the dry substance with ether. In the case of grains, seeds, nuts and flesh it is nearly pure fat and oil, but with hay, grasses and coarse fodders it contains considerable amounts of wax, gum, etc. It is often a valuable constituent of feed, is the most concentrated form of energy, and serves to build fat in the animal when in excess of its immediate energy requirements. Large amounts of fat are not tolerated by farm animals, as a rule.

FIBER, or "crude fiber," is the fibrous, woody part, not soluble in ether, dilute acid or alkali. It is largely indigestible, but serves to give the ration proper bulk. The digestibility varies with the nature of the fiber and the kind of animal. The amount of fiber is small in flesh, cereal grains and nuts, but large in stems, stalks, hays, straws, fodders, husks, hulls, cobs, etc., and its amount, as shown by analyis, indicates the presence of such materials.

NITROGEN-FREE EXTRACT, sometimes called "carbohydrates," or "soluble carbohydrates" (thereby excluding the fiber, which is an insoluble carbohydrate), is obtained by finding the amounts of the constituents enumerated above and subtracting this sum from 100 percent. It includes starch, sugars, pentosans, etc., which may be determined separately.

For inspection purposes it is generally sufficient to determine the amount of protein, fat and fiber, as this will indicate if the feed has been adulterated with inferior coarse material, such as hulls, straws, cobs, etc., as such substances are low in protein and fat but high in fiber.

In the following table the analyses are given in percentage, or pounds in a hundred.

Definitions of feeding stuffs will be found on pages 15-18.
The New Feeding Stuffs Law on pages 19-20.

No.	Name of Manufacturer and Feeding Stuffs	Place of Sampling	Protein.		Fat or Ether Extract.		Crude Fiber.	
			Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.
	Akron Feed & Milling Co. Akron, Ohio.							
40060	Portage Stock Feed	Cumberland...	13.16	8.50	3.05	4.00	11.20	10.00
	Alfalfa Milling Co., Omaha, Nebraska							
40120	Gramfalmo Horse Feed	Baltimore.....	10.09	9.00	1.82	1.50	14.90	18.00
	American Agricultural Chemical Co., Baltimore, Md.							
40099	Protox Pure Ground Meat Scraps	Baltimore.....	55.55	55.00	14.81	10.00	1.60	.....
	American Hominy Co., Indianapolis, Ind.							
40187	Homcoline	Indianapolis, Ind..	17.29	17.00	7.68	5.00	8 55	7.00
	American Linseed Co., New York, N. Y.							
40186	Old Process Linseed Meal	New York, N. Y.	34.14	34.00	6.19	5.00	8.35	8.00
	American Maize-Products Co., New York, N. Y.							
40121	Cream of Corn Gluten Feed	Baltimore.....	26.41	23.00	2.38	1.50	5.01	8.00
	American Milling Co., Peoria, Ill.							
40141	Amco Dairy Feed	Baltimore.....	26.50	25.00	7.02	8.00	13.30	16.00
40122	Amco Old Process Linseed Meal	Baltimore.....	31.33	30.00	6.68	6.00	8.10	10.00
40142	Cluck-Cluck Scratch Feed	Baltimore.....	10.71	10.00	2.81	2.50	3 05	5.00
40087	Sucrene Dairy Feed	Ellicott City...	17.97	16.50	5.82	3.50	11.20	14.00
40088	Sucrene Hog Meal	Ellicott City...	17.20	18.00	4.97	4.00	5.20	10.00
40089	Sucrene Horse Feed with Alfalfa	Ellicott City...	10.07	10.00	2.75	2.50	11.32	12.00
40090	Sucrene Scratch Feed	Ellicott City...	10.44	10.00	3.43	2.50	3.05	5.00
40143	Tip-Top Sugared Feed	Baltimore.....	14.57	12.00	4.42	2.50	15.50	14.00
	Arcady Farms Milling Co., Chicago, Ill.							
40296	Arco Milk Maker	Baltimore.....	18.43	20.00	5.39	4.00	11.61	12.00
40066	Dairy Feed	Thurmont.....	19.66	16.00	5.72	3.50	12.15	15.00
	Archer Daniels Linseed Co.. Buffalo, N. Y.							
40207	Pure Old Process Ground Oil Cake	Buffalo, N. Y.	30.54	31.00	7.44	6.00	9.85	10.00
	Ashcraft Wilkinson Co., Atlanta, Ga.							
40205	Cottonseed Feed	Atlanta, Ga...	39.49	36.00	7.78	5.50	8.60	14.00

	Baltimore Pearl Hominy Co., Baltimore, Md.							
40067	Spring Garden Dairy Feed	Westminster..	20.09	20.00	4.45	5.00	6.90	11.00
40175	Spring Garden Hominy Feed	Baltimore.....	12.02	10.00	6.91	5.00	5.30	6.00
40176	Spring Garden Horse Feed	Baltimore.....	14.92	12.00	5.80	5.00	6.25	10.00
40177	Spring Garden Brand Poultry Mash	Baltimore.....	19.66	20.00	6.42	5.00	8.10	11.00
	Baugh & Sons Co., Baltimore, Md.							
40100	Meat Meal for Poultry	Baltimore.....	55.72	50.00	13.72	10.00	2.80	1.00
	Fred. Bauernschmidt, Baltimore, Md.							
40055	Dried Brewers Grains	Baltimore.....	29.22	26.00	7.40	5.00	13.05	.....
	Berg Co., Philadelphia, Pa.							
40191	Three Medal Poultry Meat	Philadelphia, Pa..	41.51	40.00	14.28	11.00	1.85	3.00
	Black Rock Milling Corp., Black Rock, N. Y.							
40209	Pontiac Scratch Feed	Black Rock, N. Y.	10.71	10.00	3.51	1.50	2.30	5.00
	Blamberg Bros., Inc, Baltimore, Md.							
40178	Cornell Brand Laying Mash	Baltimore.....	20.27	16.00	4.14	3.50	7.55	8.00
	Blatchford Calf Meal Factory, Waukegan, Ill.							
40048	Calf Meal	Baltimore.....	26.24	24.00	5.32	5.00	6.50	6.75
40144	Egg Mash	Baltimore.....	19.22	19.00	5.22	4.00	8.60	10.00
40145	Laying Mash	Baltimore.....	22.29	20.00	6.14	5.00	7.85	8.00
40146	Milk Mash	Baltimore.....	21.59	20.00	5.18	4 00	6.05	7 50
4 147	Pig Meal	Baltimore.....	20.45	18.00	4.87	5.00	6.75	7.00
	J. Bolgiano & Sons, Baltimore, Md.							
40106	Square Deal Chick Food	Baltimore.....	11.06	10.01	3.07	3.89	2.60	2.76
40107	Square Deal Ground Beef Scrap	Baltimore.....	36.68	50.00	14.41	8.00	3.90	1.00
40264	Square Deal Dairy Feed 16%	Baltimore.....	15.09	16.00	5.37	4.00	12.85	15.00
40265	Square Deal Dairy Feed 20%	Baltimore.....	21.67	20.00	5.71	5.00	11.60	12.00
40266	Square Deal Dairy Feed 25%	Baltimore.....	26.32	25.00	6.37	5.50	10.05	11.00
40108	Square Deal Hog Meal	Baltimore.....	19.13	18.00	5.50	8.00	6.40	10.00
40109	Square Deal Horse Feed	Baltimore.....	9.74	9.00	3.64	2.00	11.65	12.00
40110	Square Deal Poultry Food	Baltimore.....	11.06	10.00	2.83	2.50	2.01	5.00
	Buckeye Cotton Oil Co., Cincinnati, Ohio							
40061	Cotton Seed Meal	Cumberland...	37.64	36.00	6.95	5.00	12.90	14.00
	F. B. Chamberlain Co., St. Louis, Mo.							
40277	Perfect Chick Feed	St. Louis, Mo.	11.14	10.00	2.54	2.50	3.95	6.00

No.	Name of Manufacturer and Feeding Stuffs.	Place of Sampling.	Protein.		Fat or Either Extract.		Crude Fiber.	
			Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.
	Chapin & Co., Chicago, Ill.							
40192	Bicorn Hog Feed	Chicago, Ill	20.45	17.50	5.24	4.00	5.15	6.00
40193	Centaur Feed	Chicago, Ill	12.64	12.00	4.97	4.00	5.02	8.00
40194	Lactola Dairy Feed	Chicago, Ill	19.22	16.50	5.26	3.00	10.10	12.00
40195	Triangle Dairy Feed	Chicago, Ill	20.09	21.00	4.47	4.00	8.55	12.00
40091	Unicorn Dairy Ration	Federalsburg	26.76	26.00	4.98	4.50	8.70	10.00
	Circleville Milling Co., Circleville, Ohio.							
40270	Yellow Feed Meal	Circleville, O	8.34	7.00	2.03	2.00	2.35	8.50
	J. H. Cissel, Silver Spring, Md.							
40304	Dairy Ration	Silver Spring	26.59	25.00	5.01	5.00	11.45	12.00
	Clover Leaf Milling Co., Buffalo, N. Y.							
40083	Advanced Register Dairy Feed	New Windsor	23.78	25.00	6.44	5.50	9.15	11.00
40084	Dairy Ration	New Windsor	20.45	16.00	5.96	4.00	11.02	15.00
40196	Peerless Milk Rations	Buffalo, N. Y.	22.03	20.00	6.35	5.00	12.35	12.00
	Commercial Milling Co., Detroit, Michigan.							
40204	Henkel's Fine White Feed	Detroit, Mich.	15.97	13.00	3.29	4.00	6.70	9.00
	G. E. Conkey Co., Cleveland, Ohio.							
40217	Buttermilk Growing Mash	Cleveland, O	18.25	18.00	5.68	4.00	5.80	5.00
40218	Buttermilk Laying Mash	Cleveland, O	17.46	18.00	6.27	4.00	4.80	6.00
40219	Buttermilk Starting Feed	Cleveland, O	13.69	12.00	4.83	3.00	3.65	4.00
40220	Scratch Feed	Cleveland, O	10.88	10.50	3.22	3.00	3.10	3.00
	Consolidated Dressed Beef Co., Philadelphia, Pa.							
40148	Beef & Bone Scraps	Baltimore	45.81	45.00	11.17	12.00	.....	.....
	Corby Co., Washington, D. C.							
40111	Dried Yeast Grains	Baltimore	17.20	16.00	4.59	5.00	18.25	22.00
	Corkran, Hill & Co., Inc., Baltimore, Md.							
40267	Digester Tankage	Baltimore	55.40	60.00	9.25	10.00	2.60	2.00
	Corn Broducts Refining Co., New York, N. Y.							
40057	Buffalo Corn Gluten Feed	Baltimore	25.97	23.00	3.55	1.00	7.05	8.00

40057	Buffalo Corn Gluten Feed	Baltimore	25.97	23.00	3.55	1.00	7.05	8.00
40123	Corn Gluten Meal	Baltimore	44.05	40.00	1.07	1.50	.80	4.00
40257	Diamond Hog Meal	New York, N. Y.	25.45	18.00	10.97	7.00	12.05	13.00
	S. P. Davis, Little Rock, Ark.							
40202	Good Luck Brand Cottonseed Meal	Little Rock, Ark.	45.37	41.00	7.25	6.00	11.05	9.00
	Albert Dickinson Co., Chicago, Ill.							
40254	Globe Egg Mash	Chicago, Ill	22.29	20.00	5.83	5.00	8.05	10.00
40255	Globe Scratch Feed	Chicago, Ill	10.79	10.00	3.13	2 50	2.55	5.00
40256	Pine Tree Scratch Feed	Chicago, Ill	10.18	10.00	2.98	2.50	2.45	5.00
40149	Rival Hog Feed	Baltimore	16.32	12.50	4.88	3.00	10.05	12.50
	Dixie Mills Co., East St. Louis, Ill.							
40045	Anchor Dairy Feed	Pocomoke City	24.42	24.00	5.65	4.00	15.30	12.00
40092	Anchor Dairy Feed	Pocomoke City	25.18	24.00	4.63	4.00	11.75	12.00
40046	Diamond Dairy Feed	Pocomoke City	14.30	16.50	4.95	3.50	10.30	17.00
40093	Diamond Dairy Feed	Pocomoke City	17.02	16.50	3.57	3.50	15.50	17.00
40094	Horse & Mule Feed	Pocomoke City	11.58	10.00	3.59	2.50	8.95	12.00
	Jacob Dolb Packing Co., Buffalo, N. Y.							
40273	Quality Digester Tankage	Buffalo, N. Y.	61.01	60.00	6.93	8.00	3.15	5.00
40274	Quality Meat and Bone Scrap	Buffalo, N. Y.	58.96	50.00	11.01	8.00	2.65	5.00
	J. C. Dow & Co., Boston, Mass.							
40124	Ground Fish Scraps	Baltimore	32.21	45.00	3.29	2.00	.....	.....
	Early & Daniel Co., Cincinnati, Ohio.							
40163	Ranger Blanched Ration	Baltimore	11.90	10.00	3.75	2.50	10.15	15.00
40164	Tuxedo Chop	Baltimore	11.86	10.00	3.60	3.00	10.70	12.00
	Edgar-Morgan Co., Memphis, Tenn.							
40272	Happy Cow Feed	Memphis, Tenn	23.34	24.00	5.46	4.50	12.02	16.00
40302	Happy Cow Dry Dairy Feed	Memphis, Tenn	28.08	24.00	5.91	5.00	12.70	13.50
40276	Happy Hog Feed	Memphis, Tenn	21.32	18.00	6.27	5.50	13.05	15.00
	John W. Eshelman, Lancaster, Pa.							
40068	Dairy Feed 20%	Walkersville	20.53	20.00	5.26	4.00	12.00	10.00
40069	Horse Feed	Walkersville	10.71	10.00	5.35	2 00	11.70	14.00
40165	Laying Mash	Baltimore	18.95	20.00	4.75	5.00	4.80	7.00
40166	Scratch Feed	Baltimore	10.71	10.00	2.38	3.00	1.95	4.00
40070	Stock Feed	Woodsboro	11.23	10.00	3.41	3.00	10.80	10.00
	Farm Equipment Co., Baltimore, Md.							
40112	Securo Digester Tankage	Baltimore	54.23	60.00	10.31	11.00	.....	.....
40292	Securo Digester Tankage	Baltimore	53.53	60.00	10.27	11.00	.....	.....
	Farmers Fertilizer & Feed Co., Westminster, Md.							
40062	Reformed Poultry Mash	Westminster	21.06	.....	7.55	...	9 75	.....

No.	Name of Manufacturer and Feeding Stuffs.	Place of Sampling.	Protein.		Fat or Ether Extract.		Crude Fiber.	
			Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.
	Frederick County Farmers Exchange, Frederick, Md.							
40071	Gambrill Dairy Feed	Frederick	14.65	16.50	6.45	5.00	12.82	12.00
40197	Scratch Feed	Frederick	10.79	10.00	3.67	2.50	3.40	5.00
	Gambrill Grain Products Co., Baltimore, Md.							
40298	Alice Ann Dairy Feed	Baltimore	16.15	16.00	6.04	4.00	8.18	14.00
30150	Alice Ann Horse Feed	Baltimore	9.77	10.00	2.11	3.00	17.80	17.00
	Grain Belt Mills Co., So. St. Joseph, Mo.							
40125	Bronco Horse & Mule Feed	Baltimore	8.93	10.00	1.60	1.50	11.90	15.00
40126	Oatfalfa Horse & Mule Feed	Baltimore	10.25	12.00	2.22	2.00	15.02	17.00
	Hales & Hunter Co., Chicago, Ill.							
40222	College Scratch Feed	Chicago, Ill.	10.62	10.00	3.11	2.50	2.85	5.00
40224	Excelsior Horse Feed	Chicago, Ill.	11.50	10.00	4.32	3.00	5.50	8.00
40260	Gold Flake Dairy Feed	Chicago, Ill.	14.82	16.00	2.31	3.50	11.60	15.00
40127	Harvest Horse Feed	Baltimore	9.12	10.00	2.11	2.00	17.20	15.00
40151	Kingfalfa Horse Feed	Baltimore	9.86	10.00	2.65	2.00	11.55	15.00
40223	Morning Glory Scratch Feed	Chicago, Ill.	11.14	10.00	3.40	2.50	3.30	5.00
40225	Red Comb Chick Mash	Chicago, Ill.	18.25	16.00	4.72	4.00	4.95	5.00
40226	Red Comb Coarse Chick	Chicago, Ill.	10.05	10.00	2.81	2.50	2.25	5.00
40072	Red Comb Mash Feed	Silver Spring	16.85	15.00	4.44	4.00	6.15	9.00
40227	Red Comb Poultry Feed	Chicago, Ill.	11.23	10.00	3.36	2.50	3.25	5.00
	W. D. Hall Co., Atlanta, Ga.							
40128	Good Cotton Seed Meal	Baltimore	38.26	36.00	7.23	5.50	9.90	14.00
	Dwight E. Hamlin, Pittsburgh, Pa.							
40199	Quality Feed	Pittsburgh, Pa.	13.78	9.00	3.78	1.50	14.60	12.00
	Hampstead Fertilizer Co., Hampstead, Md.							
40310	Dairy Feed 20%	Hampstead	22.64	20.00	4.27	4.00	8.58	12.00
	W. S. Hoge & Bro., Washington, D. C.							
40183	Best Dairy Feed	Washington, D. C.	27.82	25.00	6.05	5.00	8.65	12.00
40095	Columbia Dairy Feed	Greensboro	20.01	20.00	7.41	5.00	11.65	15.00

40086	Milk Maker Dairy Ration	LaPlata	15.80	16.00	6.14	4.50	11.05	15.00
40185	Omega Dairy Feed	Washington, D. C.	23.78	24.00	6.36	5.00	8.95	10.00
	Ideal Rendering Co., North Wales, Pa.							
40206	Meat Scraps	North Wales, Pa.	50.11	55.00	13.53	14.00	1.05	2.00
	International Sugar Feed Co., Minneapolis, Minn.							
40058	Climax Dairy Feed	Baltimore	12.64	12.50	6 60	4.00	13.80	15.00
40261	Dan Patch Horse Feed	Minneapolis, Minn.	9.82	9.00	2.10	3.00	11.65	12.50
40262	Planters Dairy Feed	Minneapolis, Minn.	20.18	22.00	5.42	3 50	8.25	18.50
40263	Ready Ration Dairy Feed	Minneapolis, Minn.	21.06	20.00	5.24	5.00	10.30	15.00
40073	Special Dairy Feed	Emmitsburg	15.71	15.00	5.65	4.50	12.10	15.00
	International Sugar Feed No. 2 Co., Memphis, Tenn.							
40074	Milk Made Dairy Feed	Detour	24.13	24.00	6.62	5.00	9.50	15.00
	International Glue Co., Boston, Mass.							
40049	Red Star Fish Scrap	Baltimore	44.41	45.00	1.30	2.00	.98	1.00
	International Vegetable Oil Co., Raleigh, N. C.							
40285	7% Cotton Seed Meal	Raleigh, N. C.	38.96	36.00	6.54	4.00	11.55	10.00
	R. D. Johnson Milling Co., Cumberland, Md.							
40188	C. O. B. Chop	Cumberland	11.32	9.00	4.16	4.00	12.50	10.50
	Kansas Flour Mills Co., Kansas City, Mo.							
40258	Brown Wheat Shorts & Wheat Screenings	Kansas City, Mo.	19.66	16.00	5.32	3.50	6.50	8.00
40259	Wheat Bran and Wheat Screenings	Kansas City, Mo.	15.62	14.50	4.39	3.50	9.95	11.00
	Kornfalfa Feed Milling Co., Kansas City, Mo.							
40167	Kay-Horse & Mule Feed	Baltimore	10.17	9.00	1.55	1.50	15.60	15.00
	Chas. A. Krause Milling Co., Milwaukee, Wis.							
40085	Badger Dairy Feed	Union Bridge	18.43	16.50	4.14	3.50	18.90	15.00
40152	Badger Evergreen Feed	Baltimore	11.21	11.00	1.37	.50	18.05	30.00
40153	Badger Hog Feed	Baltimore	16.67	15.00	5.58	5.00	8.20	7 50
40052	Badger Laying Mash	Baltimore	19.13	18.00	4.30	3.50	7.45	10.00
40129	Blue-Top Horse Feed	Baltimore	11.81	10.00	1.38	1.00	12.25	16.00
40130	Blue-Top Scratch Feed	Baltimore	10.53	9.00	2.23	2.50	3.02	5.00
40075	Cream City Dairy Feed	Walkersville	22.29	19.00	4.52	4.50	12.03	15.00
40311	Dairy Feed	Union Bridge	23.08	24.00	4.83	5.00	9.69	13.00
40297	Horse Feed	Annapolis	8.51	10.00	1.91	2.50	13.09	10.00
40313	Pennsy Horse Feed	Towson	7.81	7.00	2.18	2.00	9.72	14.00
40154	Pep Horse Feed	Baltimore	11.85	10.00	3.27	3.00	8.75	10.00
40101	Pul-Mor Horse Feed	Annapolis	9.60	9.00	2.20	1.00	14.85	16.00
40076	Sweet Cud Dairy Feed	Walkersville	25.62	24.00	5.07	3.75	10.85	15.00

No.	Name of Manufacturer and Feeding Stuffs.	Place of Sampling.	Protein.		Fat or Ether Extract		Crude Fiber.	
			FOUND.	Guaranteed.	FOUND.	Guaranteed.	FOUND.	Guaranteed.
	Lancaster Mill & Elevator Co., Lancaster, Pa.							
40295	Conestoga Horse Feed	Baltimore	9.74	9 00	1.89	2.00	10.94	14.00
40168	Dairy Feed	Baltimore	20.09	20.00	6 27	4.00	13.50	14.00
40096	Horse Feed	Pocomoke City	10.18	10.00	3.57	2.50	14.10	14.00
40299	Red Rose Dairy Feed	Pocomoke City	25.18	24.00	5.62	5.00	9.03	12.00
	Larrowe Milling Co., Detroit, Mich.							
40221	Big Six Complete Dairy Feed	Detroit	21.50	21.00	6.49	4.00	9.50	12.00
40131	Dried Beet Pulp	Baltimore	8.95	8.00	.52	.50	18.20	20.00
40077	Larro Feed for Dairy Cows	Walkersville	22.46	20.00	4.26	3.00	10.60	14.00
	Liberty Milling Co., Germantown, Md.							
40309	Macko Dairy Feed	Dickerson	16.76	16.00	5.82	3.80	9.60	4.50
	Lyle & Lyle, Huntsville, Ala.							
40190	Economy Cotton Seed Feed	Huntsville	35.89	36.00	6.22	5.00	14.75	14.00
	McMillen Co., Fort Wayne, Ind.							
40203	Wayne Dairy Feed	Fort Wayne, Ind.	23.78	21.00	5.01	3.40	9.45	12.00
40312	Wayne Hog Feed	Maple Grove	20.27	17.50	6.32	4.00	6.78	9.00
	Maner Bros., Co,, Buffalo, N. Y.							
40113	Pure Old Process Oil Meal	Baltimore	34.40	33.00	7.11	6.00	7.85	10.00
	Maritime Trading Corp., Buffalo, N. Y.							
40269	Bull Brand Dairy Ration	Buffalo, N. Y.	23.96	24.00	5.78	5.00	11.70	12.00
	D. B. Martin Co., Baltimcre, Md.							
40268	Hog Food Tankage	Baltimore	56.43	60.00	6.20	8.00	2.02	4.50
	Joel Moores & Co., Baltimore, Md.							
40132	Ground Meat Cracklings	Baltimore	61.69	50.00	15.37	12.00	.....	.....
	Nustadt & Co., New York. N. Y.							
40053	Cocoa Bean Shell Meal	Baltimore	17.20	14.00	11.92	9.00	15.30	19.00
	Newsome Feed & Grain Co., Pittsburgh, Pa.							
40287	Palmo Midds	Pittsburgh	16.41	16.00	9.34	7.00	8.60	9.00
	Norfolk Feed Milling Co., Norfolk, Va.							
40237	Norfeeco Horse & Mule Feed	Norfolk	9.96	9.00	1.62	2.00	13.90	12.00

	Northwestern Consolidated Milllng Co., Minneapolis. Minn.							
40208	Wheat Mixed Feed	Minneapolis, Minn.	15.71	15.00	4.68	4.50	7.30	10.00
	Nowak Milling Corp., Buffalo, N. Y.							
40213	Domino 24½% Dry Dairy Ration	Buffalo, N. Y.	27.47	24.50	5.77	4.50	12.75	15.00
40214	Marathon Scratch Feed	Buffalo, N. Y.	11.23	10.00	3.04	3.00	2.95	5.00
	Omaha Alfalfa Milling Co., Omaha, Neb.							
40169	Booster Horse Feed	Baltimore	9.50	9.00	1.82	1.50	13.70	18.00
40170	Grainfalmo Horse Feed	Baltimore	9.50	9.00	1.91	1.50	13.60	18.00
40051	Green Meadow Dairy Feed	Baltimore	10.88	10.00	4.00	.50	15.65	25.00
40059	Oatfalmo Horse Feed	Baltimore	9.13	9.00	2.10	1.50	11.25	18.00
40286	Special Horse Feed	Omaha, Neb.	9.81	10.00	2.11	2.00	13.70	12.00
	Omaha Flour Mills Co., Omaha, Neb.							
40234	Ofmco Spec. Wht. Midd. & Gr. Wht. Screenings	Omaha, Neb.	15.62	15.00	4.26	3.50	6.90	8.00
	Park & Pollard Co., Chicago, Ill.							
40115	Go-tu-it Hog Rations	Baltimore	18 43	15.00	7.38	6.00	9.05	13.00
40179	Lay-or-Bust Dry Mash	Baltimore	20.45	18.00	4.07	1.50	8.02	12.00
40116	Stevens Forty-four Dairy Rations	Baltimore	26.06	24.00	6.08	5.00	10.30	14.00
	M. C. Peters Mill Co., Omaha, Neb.							
40155	Arab Horse Feed	Baltimore	12.33	10.00	1.65	2.00	9.65	15.00
40156	June Pasture Feed	Baltimore	11.58	10.00	2.30	.50	10.60	26.00
40157	King Corn Horse and Mule Feed	Baltimore	11.82	10.00	1.82	1.50	13.20	18.00
	Charles Pope, Chicago, Ill.							
40228	Dried Beet Pulp	Chicago, Ill.	9.21	8.00	.92	.50	18.10	20.00
	Purity Oats Co., Davenport, Iowa							
40133	Oat Feed	Baltimore	7.37	6.73	2.36	2.00	25.90	32.65
	Quaker City Flour Mills Co., Philadelphia, Pa.							
40056	Rye Feed	Baltimore	15.53	15.00	3.80	3.75	5.40	11.00
	Quaker Oats Co. Chicago, Ill.							
40064	Big "Q" Dairy Ration	Conowingo	21.41	21.00	4.30	6.00	9.25	10.50
40300	Blue Ribbon Dairy Feed	Fruitland	21.24	21.00	3.83	5.00	9.79	11.00
40232	Boss Feed	Chicago, Ill.	10.97	8.00	4.40	3.00	11.75	12.00
40301	Buckeye Feed	Fruitland	17.38	15 50	4.90	4.00	7.55	8.50
40102	Ful-O-Pep Dry Mash	Annapolis	22.03	20.00	5.21	4.00	7.35	10.00
40114	Ful-O-Pep Scratch Grains	Baltimore	10.53	10.00	1.85	2.50	2.50	5.00
40103	Green Cross Horse Feed	Annapolis	9.46	10.00	2.31	2.50	12.05	12.00
40104	Quaker Dairy Feed With Molasses	Annapolis	16.50	16.00	5.73	4.50	14.90	16.00
40065	Schumacher Feed	Conowingo	10.71	10.00	4.90	3.25	10.40	11.00
	Ralston Purina Co., St. Louis, Mo.							
40250	Calf Chow	St. Louis, Mo.	27.82	27.00	4.76	4.50	3.70	4.50

No.	Name of Manufacturer and Feeding Stuffs.	Place of Sampling.	Protein.		Fat or Ether Extract		Crude Fiber.	
			FOUND.	Guaranteed.	FOUND.	Guaranteed.	FOUND.	Guaranteed.
	Lancaster Mill & Elevator Co., Lancaster, Pa.							
40295	Conestoga Horse Feed	Baltimore	9.74	9 00	1.89	2.00	10.94	14.00
40168	Dairy Feed	Baltimore	20.09	20.00	6 27	4.00	13.50	14.00
40096	Horse Feed	Pocomoke City	10.18	10.00	3.57	2.50	14.10	14.00
40299	Red Rose Dairy Feed	Pocomoke City	25.18	24.00	5.62	5.00	9.03	12.00
	Larrowe Milling Co., Detroit, Mich.							
40221	Big Six Complete Dairy Feed	Detroit	21.50	21.00	6.49	4.00	9.50	12.00
40131	Dried Beet Pulp	Baltimore	8.95	8.00	.52	.50	18.20	20.00
40077	Larro Feed for Dairy Cows	Walkersville	22.46	20.00	4.26	3.00	10.60	14.00
	Liberty Milling Co., Germantown, Md.							
40309	Macko Dairy Feed	Dickerson	16.76	16.00	5.82	3.80	9.60	4.50
	Lyle & Lyle, Huntsville, Ala.							
40190	Economy Cotton Seed Feed	Huntsville	35.89	36.00	6.22	5.00	14.75	14.00
	McMillen Co., Fort Wayne, Ind.							
40203	Wayne Dairy Feed	Fort Wayne, Ind.	23.78	21.00	5.01	3.40	9.45	12.00
40312	Wayne Hog Feed	Maple Grove	20.27	17.50	6.32	4.00	6.78	9.00
	Maner Bros., Co,, Buffalo, N. Y.							
40113	Pure Old Process Oil Meal	Baltimore	34.40	33.00	7.11	6.00	7.85	10.00
	Maritime Trading Corp., Buffalo, N. Y.							
40269	Bull Brand Dairy Ration	Buffalo, N. Y.	23.96	24.00	5.78	5.00	11.70	12.00
	D. B. Martin Co., Baltimcre, Md.							
40268	Hog Food Tankage	Baltimore	56.43	60.00	6.20	8.00	2.02	4.50
	Joel Moores & Co., Baltimore, Md.							
40132	Ground Meat Cracklings	Baltimore	61.69	50.00	15.37	12.00	.....	.....
	Nustadt & Co., New York. N. Y.							
40053	Cocoa Bean Shell Meal	Baltimore	17.20	14.00	11.92	9.00	15.30	19.00
	Newsome Feed & Grain Co., Pittsburgh, Pa.							
40287	Palmo Midds	Pittsburgh	16.41	16.00	9.34	7.00	8.60	9.00
	Norfolk Feed Milling Co., Norfolk, Va.							
40237	Norfeeco Horse & Mule Feed	Norfolk	9.96	9.00	1.62	2.00	13.90	12.00

	Northwestern Consolidated Milllng Co., Minneapolis. Minn.							
40208	Wheat Mixed Feed	Minneapolis, Minn.	15.71	15.00	4.68	4.50	7.30	10.00
	Nowak Milling Corp., Buffalo, N. Y.							
40213	Domino 24½% Dry Dairy Ration	Buffalo, N. Y.	27.47	24.50	5.77	4.50	12.75	15.00
40214	Marathon Scratch Feed	Buffalo, N. Y.	11.23	10.00	3.04	3.00	2.95	5.00
	Omaha Alfalfa Milling Co., Omaha, Neb.							
40169	Booster Horse Feed	Baltimore	9.50	9.00	1.82	1.50	13.70	18.00
40170	Grainfalmo Horse Feed	Baltimore	9.50	9.00	1.91	1.50	13.60	18.00
40051	Green Meadow Dairy Feed	Baltimore	10.88	10.00	4.00	.50	15.65	25.00
40059	Oatfalmo Horse Feed	Baltimore	9.13	9.00	2.10	1.50	11.25	18.00
40286	Special Horse Feed	Omaha, Neb.	9.81	10.00	2.11	2.00	13.70	12.00
	Omaha Flour Mills Co., Omaha, Neb.							
40234	Ofmco Spec. Wht. Midd. & Gr. Wht. Screenings	Omaha, Neb.	15.62	15.00	4.26	3.50	6.90	8.00
	Park & Pollard Co., Chicago, Ill.							
40115	Go-tu-it Hog Rations	Baltimore	18 43	15.00	7.38	6.00	9.05	13.00
40179	Lay-or-Bust Dry Mash	Baltimore	20.45	18.00	4.07	1.50	8.02	12.00
40116	Stevens Forty-four Dairy Rations	Baltimore	26.06	24.00	6.08	5.00	10.30	14.00
	M. C. Peters Mill Co., Omaha, Neb.							
40155	Arab Horse Feed	Baltimore	12.33	10.00	1.65	2.00	9.65	15.00
40156	June Pasture Feed	Baltimore	11.58	10.00	2.30	.50	10.60	26.00
40157	King Corn Horse and Mule Feed	Baltimore	11.82	10.00	1.82	1.50	13.20	18.00
	Charles Pope, Chicago, Ill.							
40228	Dried Beet Pulp	Chicago, Ill.	9.21	8.00	.92	.50	18.10	20.00
	Purity Oats Co., Davenport, Iowa							
40133	Oat Feed	Baltimore	7.37	6.73	2.36	2.00	25.90	32.65
	Quaker City Flour Mills Co., Philadelphia, Pa.							
40056	Rye Feed	Baltimore	15.53	15.00	3.80	3.75	5.40	11.00
	Quaker Oats Co. Chicago, Ill.							
40064	Big "Q" Dairy Ration	Conowingo	21.41	21.00	4.30	6.00	9.25	10.50
40300	Blue Ribbon Dairy Feed	Fruitland	21.24	21.00	3.83	5.00	9.79	11.00
40232	Boss Feed	Chicago, Ill.	10.97	8.00	4.40	3.00	11.75	12.00
40301	Buckeye Feed	Fruitland	17.38	15 50	4.90	4.50	7.55	8.50
40102	Ful-O-Pep Dry Mash	Annapolis	22.03	20.00	5.21	4.00	7.35	10.00
40114	Ful-O-Pep Scratch Grains	Baltimore	10.53	10.00	1.85	2.50	2.50	5.00
40103	Green Cross Horse Feed	Annapolis	9.46	10.00	2.31	2.50	12.05	12.00
40104	Quaker Dairy Feed With Molasses	Annapolis	16.50	16.00	5.73	4.50	14.90	16.00
40065	Schumacher Feed	Conowingo	10.71	10.00	4.90	3.25	10.40	11.00
	Ralston Purina Co., St. Louis, Mo.							
40250	Calf Chow	St. Louis, Mo.	27.82	27.00	4.76	4.50	3.70	4.50

No.	Name of Manufacturer and Feeding Stuffs.	Place of Sampling.	Protein.		Fat or Ether Extract		Crude Fiber.	
			FOUND.	Guaranteed.	FOUND.	Guaranteed.	FOUND.	Guaranteed.
40158	Chick Feed	Baltimore	10.79	10.00	3.70	2.50	1.30	5.00
40159	Chicken Chowder Feed	Baltimore	19.31	19.00	3.87	4.00	7.80	8.00
40160	Chicken Fatena Feed	Baltimore	16.76	9.00	6.22	5.00	6.02	9.00
40252	Feed with Molasses	St. Louis, Mo.	9.56	9.30	2.30	1.70	11.50	13.00
40251	O-Molene Feed	St. Louis, Mo.	9.73	9.70	3.16	3.20	6.60	8.00
40161	Protena Dairy Feed	Baltimore	18.34	16.50	3.45	3.50	11.35	12.00
40081	Protena Horse Feed	Baltimore	11.51	9.00	2.27	1.50	12.50	15.00
40097	Purina Cow Chow Feed	Ridgely	26.41	24.00	5.22	4.80	10.25	12.00
40098	Purina Dairy Feed	Ridgely	23.17	20.00	3.41	3.40	13.75	15.70
40082	Purina Pig Chow Feed	Baltimore	15.45	14.00	5.15	3.20	3.70	9.00
40162	Scratch Feed	Baltimore	11.14	10.00	3.04	2.50	2.30	5.00
	Reindollar Bros., & Co., Taneytown, Md.							
40216	Rein-o-la Poultry Mash	Taneytown	12.64	.....	3.58	.....	4.40	.....
	Rosenbaum Bros., Chicogo, Ill.							
40278	Rosenboro Horse Feed	Chicago, Ill.	10.04	10.00	3.58	2.00	7.90	15.00
40279	77 Dairy Feed	Chicago, Ill.	24.04	24.00	4.18	4.00	10.65	12.00
40280	Vitality Dairy Feed	Chicago, Ill.	22.82	20.00	5.65	4.00	7.55	9.00
40047	Vitality Horse Feed	Baltimore	9.48	10.00	3.02	2.00	9.80	15.00
	Ryde & Co., Chicago, Ill.							
40134	Cream Calf Meal	Baltimore	25.71	25.00	7.02	5.00	8.40	6.00
	Wm. G. Scarlett & Co., Baltimore, Md.							
40135	Oriole Dry Mash	Baltimore	25.71	20.00	6.97	4.00	9.85	9.00
40054	Peanut Meal	Baltimore	34.22	34.00	6.02	6.00	25.12	23.00
	Shane Bros., & Wilson Co., Philadelphia, Pa.							
40236	Milbourne Fancy Mixed Feed	Philadelphia, Pa.	13.78	14.75	3.47	3.80	3.75	4.36
	Sheffield-King Milling Co., Minneapolis, Minn.							
40244	Fairybow	Minneapolis, Minn.	17.55	15.00	4.67	5.00	8.10	9.50
40243	Fancy Broadflake	Minneapolis, Minn.	15.71	13.50	4.72	4.00	9.20	12.75
40245	Gold Mine Feed	Minneapolis, Minn.	17.55	15.00	5.52	4.50	7.50	9.90
	White Hope	Minneapolis, Minn.	17.55	16.00	4.61	4.50	7.15	7.65

40246	White Hope	Minneapolis, Minn.	17.55	16.00	4.61	4.50	7.15	7.65
	Sherwin-Williams Co., Cleveland, Ohio.							
40282	Linseed Oil Meal	Cleveland, Ohio..	34.31	30.00	5.79	5.00	8.90	9.00
	Smith Milling Co., Milwaukee, Wis.							
40284	4 All Stock Feed	Milwaukee, Wis..	17.55	12 00	5.57	4.00	10.15	12.00
40275	Vitex Dairy Feed	Milwaukee, Wis..	24.39	24.00	6.28	6.00	11.70	11.00
	Southern Oil & Feed Mills, Inc., Petersburg, Va.							
40198	Fifty-Fifty Roughage	Petersburg, Va.	10.22	4.00	1.01	1.00	22.90	30.00
	Spencer Kellog & Sons, Inc., Buffalo, N. Y.							
40063	Pure Old Process Cocoanut Meal	Cumberland...	24.04	20.00	9.72	6.00	8.55	11.00
40105	Pure Old Process Oil Meal	Annapolis.....	33.78	33.00	5.50	5.00	6.80	10.00
	Standard By-Products Co., Inc., Louisville, Ky.							
40281	Meat Meal	Louisville, Ky.	59.76	60.00	6.19	5.00	2.05	4.00
	Stanley Manufacturing Co., Decatur, Ill.							
40136	Corn Gluten Feed	Baltimore.....	26.68	20.00	1.19	2.50	5.90	12.00
	Wm. H. Stellman, Baltimore, Md.							
40137	Brewers Dried Grains	Baltimore.....	24.31	26.00	5.65	6.00	16.95	13.00
	Stratton-Landish Milling Co., Milwaukee, Wis.							
40283	National Scratch Feed	Baltimore.....	11.06	9.50	3.25	2.50	3.10	5.00
40210	Record Maker Chick Feed	Milwaukee, Wis..	11.67	9.50	4.69	2.50	2.55	5.00
40171	Record Maker Scratch Feed	Baltimore.....	11.23	9.50	2.65	2.50	3.45	5.00
40172	See-Lect Horse Feed	Baltimore.....	9.83	9.00	2.28	1.00	13.60	18.00
40291	True Value Chick Feed	Milwaukee, Wis..	11.50	10.00	2.39	2.50	1.27	5.00
40211	True Value Developer Feed	Milwaukee, Wis..	10.88	10.00	3.01	2.50	1.95	5.00
40173	True Value Horse Feed	Baltimore.....	11.90	9.00	2.86	1.50	10.05	15.00
40212	True Value Scratch Feed	Milwaukee, Wis..	11.23	10.00	3.35	2.50	3.02	5.00
	Sugarine Co., Peoria, Ill.							
40240	Dairy Feed	Peoria, Ill....	17.46	16.50	4.74	3.50	10.35	14.00
40241	Horse Feed with Alfalfa	Peoria, Ill.....	11.55	10.00	2.88	2.50	9.00	5.00
40271	Scratch Feed	Peoria, Ill.....	10.62	10.00	3.54	2.50	2.85	5.00
40117	Universal Scratch Feed	Baltimore.....	11.41	10.00	3.95	2.50	3.60	5.00
	Swift & Co., Inc., Chicago, Ill.							
40305	Cotton Seed Feed Meal	Silver Spring..	35.19	36.00	5.78	5.00	11.75	12.00
40118	Digester Tankage	Baltimore.....	60.90	60.00	4.21	3.00	2.97	3.00
40306	Eureka Meat Scraps	Walkersville...	53.02	55.00	13.01	6.00	1.96	3.00
40247	Gromeal	Chicago, Ill...	48.94	50.00	11.49	3.00	1.25	5.00
40248	Laymore Meat Scraps	Chicago, Ill...	40.81	45.00	9.89	6.00	2.90	3.00
40249	Poultry Bone	Chicago, Ill...	28.52	25.00	4.24	2.00	2.30	3.00

No.	Name of Manufacturer and Feeding Stuffs.	Place of Sampling.	Protein.		Fat or Ether Extract		Crude Fiber.	
			FOUND.	Guaranteed.	FOUND.	Guaranteed.	FOUND.	Guaranteed.
	Taylor Commission Co., Atlanta, Ga.							
40294	Good Cotton Seed Meal	Baltimore	36.15	36.00	6.44	5.50	10.67	14.00
	Tennessee Fiber Co., Memphis, Tenn.							
40139	Creamo Brand Cotton Seed Feed Meal	Baltimore	19.31	20.00	3.49	4.00	24.25	25.00
	Thomas & Co., Frederick, Md.							
40235	Dairy Feed	Silver Spring	15.88	15.50	3.30	3.50	11.35	14.00
40307	Goodlow Cottonseed Feed	Frederick	36.68	36.00	5.94	5.00	12.47	16 00
40181	Victory Feed	Walkersville	19.48	24.00	4.78	5.00	12.80	10.00
	Ubiko Milling Co., Cincinnati, Ohio.							
40079	Biles Ready Dairy Ration	Silver Spring	25.45	24.00	4.94	5.00	9.10	10.00
40238	Dried Beef Pulp	Cincinnati, Ohio	9.74	8.00	.58	.50	18.60	20.00
	Union Seed & Fertilizer Co., New York, N. Y.							
40239	American Red Tag Cotton Seed Meal	New York, N. Y.	36.94	38.62	6.20	6.00	11.75	11.50
40289	Columbia Cotton Seed Feed	New York, N. Y.	20.71	20.56	4.45	3.00	22.53	25.00
40140	Surety Brand Cotton Seed Feed	Baltimore	35.36	36.00	6.71	5.50	12.10	14.00
	Van Iderstine Co., Long Island City, N. Y.							
40288	High Protein Meat Scraps	Long I. City, N. Y.	55.98	55.00	10.22	5.00	2.40	3.00
40174	Pure Ground Meat Scraps	Baltimore	49.10	45.00	10.95	5.00	2.85	3.00
	Virginia Feed & Milling Corp., Alexandria, Va.							
40119	Fairfax Horse and Mule Feed	Baltimore	10.68	10.00	2.38	3.00	14.55	20.00
40200	Red Star Dairy Feed	Alexandria, Va	15.09	15.00	3.40	3.00	31.80	16.00
40201	Supreme Dairy Feed	Alexandria, Va	23.03	25.00	4.69	3.50	9.30	15.00
	Wathen Milling Co., Louisville, Ky.							
40242	Hominy Feed	Louisville, Ky.	11.50	10.00	7.66	6.00	5.10	7 00
	Western Grain Products Co., Hammond, Ind.							
40230	Calumet Alfalfa Horse Feed	Hammond, Ind.	12.55	10.00	3.63	2.50	11.45	15.00
40229	Calumet Dairy Feed	Hammond, Ind.	20.27	20.00	4.90	5 00	12.50	11.00
40231	Calumet Scratch Feed	Hammond Ind.	10.27	10.00	3.56	2.50	2.65	5.50
40080	Dairy Feed	Barnesville	18.16	16.50	5.26	3.50	12.15	14.20
	Willis Norton & Co., North Topeka, Kan.							
40253	Wheat, Bran & Screenings	N. Topeka, Kan.	16.41	14.50	4.22	3.50	7.95	10.00

DEFINITIONS OF FEEDING STUFFS

ADOPTED BY THE ASSOCIATION OF FEED CONTROL OFFICIALS.

Meal is the clean, sound, ground product of the entire grain, cereal or seed which it purports to represent.

Chop is a ground or chopped feed composed of one or more different cereals or by-products thereof. If it bears a name descriptive of the kind of cereals, it must be made exclusively of the entire grains of those cereals.

Alfalfa meal is the entire alfalfa hay ground, and does not contain an admixture of ground alfalfa straw or other foreign materials.

ANIMAL PRODUCTS

Blood meal is ground dried blood.

Cracklings are the residue after partially extracting the fats and oils from the animal tissues. If they bear a name descriptive of their kind, composition or origin, they must correspond thereto.

Digester Tankage is the residue from animal tissues, exclusive of hoof and horn, specially prepared for feeding purposes by tanking under live steam, drying under high heat, and suitable grinding. If it contains more than 10 per cent. of phosphoric acid (P_2O_5) it must be designated **Digester Meat and Bone Tankage.**

Meat Scrap and Meat Meal are the ground residues from animal tissues exclusive of hoof and horn. If they contain more than 10 per cent. of phosphoric acid (P_2O_5) they must be designated **Meat and Bone Scrap and Meat and Bone Meal.** If they bear a name descriptive of their kind, composition or origin, they must correspond thereto.

BARLEY PRODUCTS

Barley Feed is the entire by-product resulting from the manufacture of pearl barley from clean barley.

Barley Mixed Feed is the entire offal from the milling of barley flour from clean barley and is composed of barley hulls and barley middlings.

BREWERS' AND DISTILLERS' PRODUCTS

Brewers' Dried Grains are the properly dried residue from cereals obtained in the manufacture of beer.

Distillers' Dried Grains are the dried residue from cereals obtained in the manufacture of alcohol and distilled liquors. The product shall bear the designation indicating the cereal predominating.

Malt Sprouts are the sprouts of the barley grain. If the sprouts are derived from any other malted cereal, the source must be designated.

BUCKWHEAT PRODUCTS

Buckwheat Shorts or **Buckwheat Middlings** are that portion of the buckwheat grain immediately inside of the hull after separation from the flour.

CORN PRODUCTS

Corn Bran is the outer coating of the corn kernel.

Corn Feed Meal is the by-product obtained in the manufacture of cracked corn, with or without aspiration products added to the siftings, and is also the by-product obtained in the manufacture of table meal from the whole grain by the non-degerminating process.

Corn Germ Meal is a product in the manufacture of starch, glucose and other corn products, and is the germ layer from which part of the corn oil has been extracted.

Grits are the hard, flinty portions of Indian corn, without hulls and germs.

Corn Gluten Meal is that part of commercial shelled corn that remains after the separation of the larger part of the starch, the germ and the bran, by the processes employed in the manufacture of cornstarch and glucose. It may or may not contain corn solubles.

Corn Gluten Feed is that portion of commercial shelled corn that remains after the separation of the larger part of the starch and the germs by the processes employed in the manufacture of cornstarch and glucose. It may or may not contain corn solubles.

Hominy Feed, Hominy Meal or **Hominy Chop** is the kiln-dried mixture of the mill-run bran coating, the mill-run germ, with or without a partial extraction of the oil and a part of the starchy portion of the white corn kernel obtained in the manufacture of hominy, hominy grits and corn-meal by the degerminating process.

Yellow Hominy Feed, Yellow Hominy Meal or **Yellow Hominy Chop** is a kiln-dried mixture of the mill-run bran coating, the mill-run germ, with or without a partial extraction of the oil and a part of the starchy portion of the yellow corn kernel obtained in the manufacture of yellow hominy grits and yellow corn-meal by the degerminating process.

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OIL CAKE

Oil Cake is the residual cake obtained after extraction of part of the oil by crushing, cooking and hydraulic pressure from seeds screened and cleaned of weed seeds and other foreign materials by the most improved commercial processes. When used alone the term "oil cake" shall be understood to designate the product obtained from partially extracted, screened and cleaned flaxseed. When used to cover any other product, the name of the seed from which it is obtained shall be prefixed to "oil cake."

Ground Oil Cake is the product obtained by grinding oil cake. When used alone, the term "ground oil cake" shall be understood to designate the product obtained from partially extracted, screened and cleaned flaxseed. When used to cover any other product the name of the seed from which it is obtained shall be prefixed to "ground oil cake."

COTTONSEED PRODUCTS

Cottonseed-Meal is a product of the cottonseed only, composed principally of the kernel with such portion of the hull as is necessary in the manufacture of oil; provided that nothing shall be recognized as cottonseed-meal that does not conform to the foregoing definition and that does not contain at least 36 per cent. of protein.

Choice Cottonseed-Meal must be firmly ground, not necessarily bolted, perfectly sound and sweet in odor, yellow, free from excess of lint, and must contain at least 41 per cent. of protein.

Prime Cottonseed-Meal must be finely ground, not necessarily bolted, of sweet odor, reasonably bright in color, yellow, not brown or reddish, free from excess of lint, and must contain at least 38.6 per cent. of protein.

Good Cottonseed-Meal must be finely ground, not necessarily bolted, of sweet odor, reasonably bright in color, and must contain at least 36 per cent. of protein.

Cottonseed Feed is a mixture of cottonseed-meal and cottonseed-hulls, containing less than 36 per cent. of protein.

Cold Pressed Cottonseed is the product resulting from subjecting the whole undecorticated cottonseed to the cold pressure process for the extraction of oil, and includes the entire cottonseed less the oil extracted.

Ground Cold Pressed Cottonseed is the ground product resulting from subjecting the whole undecorticated cottonseed to the cold pressure process for the extraction of oil, and includes the entire ground cottonseed less the oil extracted.

LINSEED AND FLAX PRODUCTS

Linseed Meal is the ground product obtained after extraction of part of the oil from ground flaxseed screened and cleaned of weed seeds and other foreign materials by the most improved commercial processes, provided that the final product shall not contain over six per cent. of weed seeds and other foreign materials and provided further that no portion of the state six per cent. of weed seeds and other foreign materials shall be deliberately added.

Oil Meal is the ground product obtained after the extraction of part of the oil by crushing, cooking and hydraulic pressure, or by crushing, heating and the use of solvents from seeds which have been screened and cleaned of weed seeds and other foreign materials by the most improved commercial processes. When used alone the term "Oil Meal" shall be understood to designate linseed meal as defined. When used to cover any other product the name of the seed from which it is obtained shall be prefixed to the words "oil meal."

Old Process Oil Meal is the ground product obtained after extraction of part of the oil by crushing, cooking and hydraulic pressure from seeds screened and cleaned of weed seeds and other foreign materials by the most improved commercial processes. When used alone the term "Old Process Oil Meal" shall be understood to designate linseed meal as defined, made by the old process. When used to cover any other product the name of the seed from which it is obtained shall be prefixed to "old process oil meal."

New Process Oil Meal is the ground product obtained after extraction of part of the oil by crushing, heating and the use of solvents from seeds screened and cleaned of weed seeds and other foreign materials by the most improved commercial processes. When used alone the terms "New Process Oil Meal" shall be understood to designate linseed meal as defined, made by the new process. When used to cover any other product the name of the seed from which it is obtained shall be prefixed to "new process oil meal."

Flax Plant By-Product is that portion of the flax plant remaining after the separation of the seed, the bast fiber and a portion of the shives, and consists of flax shives, flax pods, broken and immature flax seeds, and the cortical tissues of the stem.

Ground Flaxseed or **Flaxseed Meal** is the product obtained by grinding flaxseed which has been screened and cleaned of weed seeds and other foreign materials by the most improved commercial processes, provided that the final product shall not contain over four per cent. of weed seeds and other foreign materials, and provided further that no portion of the stated four per cent. of weed seeds and other foreign materials shall be deliberately added.

Unscreened Flaxseed Oil Feed is the ground product obtained after extraction of part of the oil from unscreened flaxseed by crushing, cooking and hydraulic pressure, or by crushing, heating and the use of solvents. When sold without

grinding the unground product shall be designated as "unscreened flaxseed oil feed cake."

Ingredients of Unscreened Flaxseed Oil Feed—Ground cake from partially extracted flaxseed and foreign seeds (wheat, wild buckwheat, pigeon grass, wild mustard, etc.).

Screenings Oil Feed is the ground product obtained after extraction of part of the oil by crushing, cooking and hydraulic pressure, or by crushing, heating and the use of solvents from the smaller imperfect grains, weed seeds and other foreign materials, having feeding value, separated in cleaning the grain. The name of the grain from which the screenings are separated shall be prefixed to "screenings oil feed."

OAT PRODUCTS

Oat Groats are the kernels of the oat berry.

Oat Hulls are the outer chaffy coverings of the oat grain.

Oat Middlings are the floury portions of the oat groat obtained in the milling of rolled oats.

Oat Shorts are the covering of the oat grain lying immediately inside the hull, being a fuzzy material carrying with it considerable portions of the fine floury part of the groat obtained in the milling of rolled oats.

Clipped Oat By-Product is the resultant by-product obtained in the manufacture of clipped oats. It may contain light chaffy material broken from the ends of the hulls empty hulls, light, immature oats and dust. It must not contain an excessive amount of oat hulls.

PEANUT PRODUCTS

Peanut Oil Cake is the residue after the extraction of part of the oil by the pressure or solvents from peanut kernels.

Peanut Oil Meal is the ground residue after the extraction of part of the old from peanut kernels.

Unhulled Peanut Oil Feed is the ground residue obtained after extraction of part of the oil from whole peanuts and the ingredients shall be designated as **Peanut Meal and Hulls.**

RICE PRODUCTS

Rice Bran is the cuticle beneath the hull.

Rice Hulls are the outer chaffy coverings of the rice grain.

Rice Polish is the finely powdered material obtained in polishing the kernel.

WHEAT PRODUCTS

Wheat Bran is the course outer coating of the wheat kernel as separated from cleaned and scoured wheat in the usual process of commercial milling.

Standard Middlings (Red Shorts or Brown Shorts) consists mostly of the fine particles of bran, germ and very little of the fibrous offal obtained from the "tail of the mill." This product must be obtained in the usual commercial process of milling.

Gray Shorts (Gray Middlings or Total Shorts) consists of the fine particles of the outer bran, the inner or "bee-wing" bran, the germ, and the offal or fibrous material obtained in the usual commercial process of flour milling.

Flour Middlings shall consist of standard middlings and red dog flour combined in the proportions obtained in the usual process of milling.

White Shorts or **White Middlings** consists of a small portion of the fine bran particles and the germ and a large portion of the fibrous offal obtained from the "tail of the mill." This product must be obtained in the usual process of flour milling.

Red Dog Flour consists of a mixture of low-grade flour, fine particles of bran and the fibrous offal from the "tail of the mill."

Wheat Mixed Feed (Mill Run Wheat Feed) consists of pure wheat bran and the gray or total shorts or flour middlings combined in the proportions obtained in the usual process of commercial milling.

Wheat Bran and **Standard Middlings** consists of the two commodities as defined above mixed in the proportions obtained in the usual process of commercial milling.

Screenings consists of the smaller imperfect grains, weed seeds and other foreign materials, having feeding value, separated in cleaning the grain.

Scourings consists of such portions of the cuticle, brush, white caps, dust, smut and other materials as are separated from the grain in the usual commercial process of scouring.

(Note)—If to any of the wheat by-product feeds there should be added screenings or scourings, as defined either ground or unground, bolted or unbolted, such brand shall be so registered, labeled and sold as clearly to indicate this fact. The word "Screenings" or "Scourings" as the case may be, shall appear as a part of the name or brand and shall be printed in the same size and face of type as the remainder of the brand name. When the word "Screenings" appears it is not necessary to show also on the labeling the word "Scourings."

MISCELLANEOUS PRODUCTS

Dried Beet Pulp is the material obtained by drying the residue from sugar beets which have been cleaned and freed from crowns, leaves and sand and which have been extracted in the process of manufacturing sugar.

Cocoanut Oil Meal ("Copra Oil Meal") is the ground residue from the extraction of part of the oil from the dried meat of the cocoanut.

Ivory Nut Meal is ground ivory nuts.

Palm Kernel Oil Meal is the ground residue from the extraction of part of the oil by pressure or solvents from the kernel of the fruit of Elaeis guineensis or Elaeis malanococca.

Yeast or Vinegar Dried Grains are the properly dried residue from the mixture of cereals, malt and malt sprouts (sometimes cottonseed-meal) obtained in the manufacture of yeast or vinegar, and consists of corn or corn and rye from which most of the starch has been extracted, together with malt added during the manufacturing process to change the starch to sugars, and malt sprouts (sometimes cottonseed-meal) added during the manufacturing process to aid in filtering the residue from the wort and serve as a source of food supply for the yeast.

TENTATIVE DEFINITIONS

Barley Hulls are the outer chaff coverings of the barley grain.

Choice Cottonseed-Meal must be finely ground, not necessarily bolted, perfectly sound and sweet in odor, yellow, free from excess of hulls and lint, and must contain at least 41.12 per cent. protein.

Medium Grade Cottonseed-Meal must be finely ground, not necessarily bolted, of sweet odor, reasonably bright in color, yellow, not brown or reddish, free from excess of lint, and must contain at least 38.56 per cent. protein.

Low Grade Cottonseed-Meal must be finely ground, not necessarily bolted, of sweet odor, reasonably bright in color, and must contain at least 36 per cent. protein.

Distillers' Corn Solubles, a by-product from the manufacture of alcohol from corn, is a mash liquor concentrated after the removal of the alcohol and wet grains.

Distillers' Corn and Rye Solubles, a by-product from the manufacture of alcohol from corn and rye, is a mash liquor concentrated after the removal of the alcohol and wet grains.

Distillers' Rye Solubles, a by-product from the manufacture of alcohol from rye, is a mash liquor concentrated after the removal of the alcohol and wet grains.

Fish Meal shall be the dried ground residue from fish. It shall be made from undecomposed fish and the oil contained therein must not be rancid.

Fish Oil Meal shall be the undecomposed product from the extraction of oil from fish or fish residues.

Non-Oily Fish Meal shall be the clean undecomposed residue from the manufacture of glue from non-oily fish.

Rice Bran is the cuticle of the rice grain, with only such quantity of hull fragments as is unavoidable in the regular milling of rice.

Rye Middlings (Rye Feed) consists of the products other than the flour obtained in the manufacture of the ordinary or "100%" rye flour from the rye grain which has been cleaned and scoured.

Rye Red Dog Flour consists of a mixture of low-grade flour, fine particles of bran and the fibrous offal from the "tail of the mill."

Velvet Bean Meal is ground velvet beans containing only an unavoidable trace of hulls or pods.

Ground Velvet Bean and Pod is the product derived by grinding velvet beans "in the pod." It contains no additional pods or other material.

Wheat Ship Stuff is the entire offad exclusive of the outer bran obtained in the usual process of commercial milling of flour.

N. B.—The note following wheat products is to apply likewise in the case of wheat ship stuff and rye products as above defined.

FEED STUFF LAW OF MARYLAND (In effect June 1, 1920.)

80. The term "Commercial Feeding Stuffs" shall be held to include all feeding stuffs used for feeding live stock and poultry, except the following:

(a) Whole seeds or grains.

(b) The unmixed meals made directly from and consisting of the entire grains of corn, wheat, rye, barley, oats, buckwheat, flaxseed, kafir and milo.

(c) Whole hays, straws, cottonseed hulls and corn stover, when unmixed with other materials.

(d) All other materials containing 60 per centum or more of water.

81. Every lot or parcel of commercial feeding stuffs sold, offered or exposed for sale or distributed within this State shall have printed thereon or affixed thereto a tag or label, in a conspicuous place on the outside thereof, containing a legible and plainly printed statement in the English language, clearly and truly certifying:

(a) The net weight of the contents of the package, lot or parcel;

(b) The name, brand or trade mark;

(c) The name and principal address of the manufacturer or person responsible for placing the commodity on the market;

(d) The minimum per centum of crude protein;

(e) The minimum per centum of crude fat;

(f) The maximum per centum of crude fiber;

(g) The specific name of each ingredient used in its manufacture.

82. Before any manufacturer, importer, jobber, firm, association, corporation or person shall sell, offer or expose for sale or distribute in this State any commercial feeding stuffs, he or they shall file with the State Chemist, as appointed by the State Board of Agriculture, a certified copy of the statement specified in Section 81, with the exception of sub-division (a), for each brand of commercial feeding stuffs; said certified copy to be accompanied, when the state chemist shall so request, by a sealed package containing at least one pound of the commercial feeding stuffs to be sold, offered or exposed for sale or distributed in this State, and the company or person furnishing said sample shall thereupon certify that the said sample is representative of the commercial feeding stuffs, offered for registration.

83. Each and every manufacturer, importer, jobber, firm, association, corporation or person manufacturing, selling, offering or exposing for sale or distributing any commercial feeding stuffs as defined in Section 80 of this Article, shall pay to the Maryland State College of Agrculture an annual inspection fee of twenty dollars ($20) for each brand of commercial feeding stuff sold, offered or exposed for sale or distributed in this State and receive therefore a license to sell such commercial feeding stuffs until the first day of January next following; said fees to constitute a fund for the payment of the cost of the inspections, sampling, analysis and other expenses incident to putting into effect the provisions of this Act. Whenever any commercial feeding stuffs, as defined in Section 80, is offered or exposed for sale in bulk or otherswise stored, the manufacturer, importer, jobber, firm, association, corporation or person keeping the same for sale shall keep on hand tags upon which shall be printed the statement required by the provisions of Section 81, and when such feeding stuffs is sold at retail in bulk or in packages belonging to the purchaser, the manufacturer, importer, jobber, firm, association, corporation or person shall furnish the purchaser with sufficient tags for said packages, and, upon request, with a card or cards upon which appears the statement required by the provisions of Section 81.

84. The state chemist shall have power to refuse to register any commercial feeding stuff under a name, brand or trade mark which would be misleading or deceptive, or which would tend to mislead or deceive as to the materials of which it is composed, or when the specific name of each and all ingredients used in its manufacture are not stated. He shall also have the power to refuse to register more than one commercial feeding stuff under the same name or brand when offered by the same manufacturer, importer, jobber, firm, association, corporation or person. Should any commercial feeding stuffs be registered in this State, and it is afterwards discovered that such registration is in violation of any of the provisions of this Act, the state chemist shall have the power to cancel such registration. The state chemist shall have the power to refuse to allow any manufacturer, importer, jobber, firm, association, corporation or person to lower the guaranteed analysis or change the ingredients of any brand of his or their commercial feeding stuffs during the term for which registered, unless satisfactory reasons are presented for making such change or changes.

85. Whenever a manufacturer, importer, jobber, firm, association, corporation or person manufacturing or selling a brand of commercial feeding stuffs shall have filed the statement required by Section 82 and paid the inspection fee, as

required by Section 83 of this Act, no other agent, importer, jobber, firm, association, corporation or person shall be required to file such statement or pay such fee upon such brand.

86. The state chemist is authorized in person or by deputy to have free access to all places of business, mills, buildings, carriages, cars, vessels and parcels of whatsoever kind used in manufacture, transportation, importation, sale or storage of any commercial feeding stuffs, and shall have the power and authority to open any parcel containing or supposed to contain any commercial feeding stuffs, and to take therefrom samples for analysis, and said state chemist shall annually cause to be analyzed at least one sample so taken of every commercial feeding stuffs that is found, sold, offered or exposed for sale or distributed in this State, and the result of such analysis, together with such additional information as the said state chemist may deem advisable, shall be transmitted to the manufacturer or person responsible for placing the commodity on the market, and shall be published in reports or bulletins from time to time.

87. If it appears that any of the provisions of this Act have been violated, the state chemist shall certify the facts to the proper prosecuting attorney and furnish that officer with a copy of the result of the analysis or other examination of such feeding stuffs duly authenticated by the analyst or other officer making the determination, under the oath of such officer; provided, that if it shall appear from any such examination that any of the provisions of this Act have been violated the state chemist shall cause notice to be given to the manufacturer or dealer from whom said sample was taken; any party so notified shall be given an apportunity to be heard in his defence under such rules and regulations as may be prescribed by the state chemist before the facts shall be certified to the proper prosecuting attorney. In all prosecutions arising under the provisions of this Act, certificates of the analyst or other officer making the examination or analysis, when duly sworn to by such officer, shall be prima facie evidence of the fact or facts therein certified.

88. Any manufacturer, importer, jobber, firm, association, corporation or person who shall sell, offer or expose for sale, or distribute in this State, any commercial feeding stuffs without having attached thereto or printed thereon the analysis and statement as required by the provisions of this Act, or who shall impede, obstruct, hinder or otherwise prevent or attempt to prevent said state chemist or his authorized agent in the performance of his duty in connection with the provisions of this Article, or who shall sell, offer or expose for sale or distribute in this State any commercial feeding stuffs as defined in Section 80, without complying with the requirements of the provisions of this Act, or who shall sell, offer or expose for sale or distribute in this State any commercial feeding stuffs which contains a smaller per centum of crude protein or crude fat or a larger per centum of crude fiber than is certified to be contained therein, or who shall fail to properly state the specific name of each and every ingredient used in its manufacture, shall be deemed guilty of a violation of the provisions of this Article and upon conviction thereof shall be fined not more than one hundred dollars ($100.00) for the first violation and not less than one hundred dollars ($100.00) for each subsequent violation. Any manufacturer, importer, jobber, firm, association, corporation or person who shall mix or adulterate any feeding stuffs with any substance or substances injurious to the health of live stock or poultry shall be deemed guilty of a violation of the provisions of this Act, and in addition to the penalty provided in this section, the lot of feeding stuffs shall be subject to seizure, condemnation and sale as the Court may direct; the proceeds from such sale to be paid into the treasury of the Maryland State College of Agriculture to be added to the fund provided for in Section 83. The Court may, in its discretion, release the feeding stuffs so seized when the requirements of the provisions of this Act have been complied with, and upon payment of all costs and expenses incurred by the State in any proceedings connected with such seizure.

88-A. If it shall be found upon analysis or other examination that any feeding stuff is deficient in one or more valuable constituent or that an inferior product has been substituted in whole or in part the purchaser or purchasers shall be entitled to recover as damages a sum equal to twice the commercial value of said deficiency, to be determined by reasonable rules to be published by said state chemist with the approval of the State Board of Agriculture.

88-B. The Maryland State Board of Agriculture is hereby empowered to enforce the provisions of this Act and to prescribe the form of tags or labels to be used on commercial feeding stuff and to prescribe and enforce such rules and regulations relating to the sale of commercial feeding stuffs as it may deem necessary to carry into effect the full intent and meaning of this Act.

SEC. 3. *And be it further enacted,* That all laws or parts of laws in conflict with the provisions of this Act are hereby repealed.

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